**LISTING OF THE CLAIMS**:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-29 (Cancelled).

30. (Currently Amended) An engineering system for describing a subject solid shape existing in a three-dimensional space with use of a three-dimensional bit map having a cell comprising:

a grid that divides said three-dimensional space into a plurality of cells wherein each of said cells includes information that denotes whether its center exists inside or outside the subject solid shape,

a solid shape describing apparatus provided with a memory for storing programs;

a data storage unit;

a display unit; and

a plurality of functions provided by the programs, said functions comprising:

a function for receiving a definition of a plurality of different coordinate systems to said solid shape described by the three-dimensional bit-map;

a function for receiving a definition that an area ~~occupied~~ where each inside grid of said solid shape is described by one of said plurality of different coordinate systems overlaps with a part or whole of an area ~~occupied~~ where each surface grid of said solid shape is described by another coordinate system; and

a function for converting said three-dimensional bit-map to its solid shape data with use of said defined plurality of different coordinate systems and displaying said solid shape according to said solid shape data on the display unit.

31. (Currently Amended) A method for describing a subject solid shape existing in a three-dimensional space with use of a three-dimensional bit map having a cell comprising:

defining a grid that divides said three-dimensional space into a plurality of cells wherein each of said cells includes information that denotes whether its center exists inside or outside the subject solid shape;

receiving a definition of a plurality of different coordinate systems to said solid shape described by the three-dimensional bit-map;

receiving a definition that an area ~~occupied~~ where each inside grid of said solid shape is described by one of said plurality of different coordinate systems overlaps with a part or whole of an area ~~occupied~~ where each surface grid of said solid shape is described by another coordinate system; and

converting said three-dimensional bit-map to its solid shape data with use of said defined plurality of different coordinate systems and displaying said solid shape according to said solid shape data on the display unit.